

SEQUENCE LISTING

<110> PALESE, PETER
BASLER, CHRISTOPHER F.
GARCIA-SASTRE, ADOLFO

<120> CHRIS-LIKE VIRUS, COMPOSITIONS, VACCINES AND USES THEREOF

<130> PP-26000-US

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<150> 60/483,337

<151> 2003-06-27

<160> 18

<170> PatentIn Ver. 3.2

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<211> 1690

<212> DNA

<213> Homo sapiens

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<210> 3
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<213> Homo sapiens

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      50             55             60
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      85             90             95
Asn Gly Gly Asp Ser Gln Asn Glu Tyr Gln Gly Ser Asp Gln Gln Val
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Pro Thr Gly Gly Leu Pro Thr Ala Gly Glu Arg Gly Tyr Pro Ile Thr
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Leu Lys Asp Ser Ile Arg Gln Ser Asn Lys Ala Ile Gln Glu Leu Gln
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Thr Ala Met Ser Thr Thr Val Val Val Leu Asn Ala Leu Gln Asp Gln
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<210> 7

<211> 1691

<212> DNA

<213> Paramyxovirus Chris-like Virus

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<212> DNA

<213> Paramyxovirus Chris-like Virus

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<210> 9

<211> 340

<212> PRT

<213> Paramyxovirus Chris-like Virus

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      35             40             45
Lys Ser Ala Gly Tyr Met Tyr Leu Leu Val His Gly Ile Ile Glu Glu
      50             55             60
Lys Asp Val Ala Gly Ala Ser Ala Lys Asn Asn Lys Thr Phe Ala Ala
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Phe Pro Leu Gly Val Gly Arg Ser Asn Ala Leu Pro Gln Asp Leu Leu
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Ser Glu Met Leu Val Phe Gly Thr Ser Asn Ile Ser Pro Val Leu Thr
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<212> PRT

<213> Paramyxovirus Chris-like Virus

<400> 10

Met	Ser	Asp	Tyr	Asn	Pro	Asp	Val	Leu	Gln	Gln	Leu	Val	Lys	Asp	Gly
1				5					10					15	
Ile	Lys	Thr	Ile	Glu	Leu	Leu	Gln	Gln	Ser	Pro	Glu	Asp	Phe	Gln	Lys
		20					25						30		
Thr	Tyr	Gly	Arg	Ser	Ala	Ile	Gln	Glu	Pro	Ser	Thr	Arg	Ala	Arg	Ile
		35					40					45			
Gln	Ser	Trp	Glu	Ser	Arg	Asn	Pro	Asp	His	Asp	Tyr	Thr	Gly	Asn	Lys
	50					55				60					
Asn	Gln	Arg	Ser	Glu	Gly	Ala	Lys	Glu	Arg	Ala	Asn	Lys	Ser	Glu	Ser
65				70					75						80
Ala	Gly	Thr	Ala	Ser	Ala	Asp	Gly	Gly	His	Gly	Asp	Lys	Pro	Ser	Asn
			85					90					95		
Asn	Gly	Gly	Asp	Ser	Gln	Asn	Glu	Tyr	Gln	Gly	Ser	Asp	Gln	Gln	Val
			100					105					110		
Trp	Asp	Ala	Ala	Tyr	Asn	Asp	Gly	Asn	Ser	Gly	Gly	Ala	Trp	Gly	Gly
	115						120					125			
Pro	Thr	Gly	Gly	Leu	Pro	Thr	Ala	Gly	Glu	Arg	Gly	Tyr	Pro	Ile	Thr
	130					135					140				
Thr	Gly	Asn	Gln	Glu	Phe	Glu	Gly	Tyr	His	Pro	Asp	Gly	Pro	Val	Asp
145				150					155						160
Ala	Arg	Glu	Tyr	Asn	Gln	Ile	Ser	Ser	Met	Asp	His	Glu	Met	Ser	Ala
				165					170					175	
Ala	Glu	Thr	Leu	Gly	Ser	Ser	Thr	Gln	Leu	Thr	Thr	Met	Arg	Asn	Ala
			180					185					190		

Thr	Thr	Asp	Asp	Phe	Ala	Lys	Ile	Phe	Glu	Glu	Gly	Thr	Pro	Lys	Val
		195					200					205			
His	Arg	Arg	Leu	Arg	Gly	Ile	Thr	Ala	Val	Val	Pro	Ala	Gln	Lys	Gln
	210					215					220				
Pro	Gly	Ala	Val	Gly	Gly	Pro	Val	Lys	Lys	Gly	Thr	Asp	Gly	Ser	Thr
	225				230					235					240
Ala	Ser	Thr	Leu	Leu	Gly	Asp	Val	Pro	Leu	Ser	Gly	Ser	Gly	Ala	Ile
				245					250					255	
Pro	Asn	Val	His	Pro	Ser	Leu	Leu	His	Gln	Pro	Lys	Lys	Asn	Ala	His
		260						265					270		
Ala	Glu	Asn	Ala	Gln	Gly	Ser	Val	Gln	Asp	Val	Ser	Thr	Thr	Gly	Ala
	275						280					285			
Ile	Gly	Gln	Ser	Asp	Glu	Ala	Ala	His	Phe	Asp	Gln	Glu	Ile	Glu	Gly
	290				295						300				
Lys	Leu	Asn	Leu	Val	Leu	Lys	Glu	Leu	Asp	Leu	Ile	Ser	Lys	Lys	Leu
	305				310					315					320
Asp	Tyr	Leu	Pro	Glu	Ile	Lys	Glu	Glu	Ile	Arg	Asn	Ile	Asn	Lys	Lys
				325					330					335	
Ile	Thr	Asn	Leu	Ser	Leu	Gly	Leu	Leu	Tyr	Ser	Leu	Lys	Thr	Tyr	Ile
		340						345					350		
Lys	Ser	Met	Met	Ile	Ile	Ile	Pro	Ser	Ser	Gly	Lys	Pro	Asp	Val	Asn
	355					360						365			
Asp	Thr	Ala	Glu	Val	Asn	Pro	Asp	Leu	Lys	Ala	Val	Ile	Gly	Arg	Asp
	370				375						380				
Lys	Thr	Arg	Gly	Leu	Lys	Glu	Val	Thr	Thr	His	Arg	Ser	Asp	Leu	Glu
	385				390					395					400
Ser	Leu	Asp	Leu	Leu	Ser	Pro	Ala	Thr	Ser	Glu	Ile	Asp	Pro	Lys	Tyr
			405						410					415	
Leu	Thr	Gln	Asp	Leu	Asp	Phe	Thr	Lys	Ser	Asn	Ala	Ala	Asn	Phe	Val
		420						425					430		
Pro	Gly	Asn	Asp	Ala	Ser	Ser	Phe	Tyr	Thr	Ile	Val	Ala	Met	Ile	Lys
		435					440					445			
Gly	Glu	Val	Thr	Asp	Val	Lys	Arg	Gln	Gln	Glu	Leu	Ile	Lys	Trp	Val
	450					455					460				
Ser	Asp	Ser	Met	Asn	Lys	His	Pro	Met	Gly	Gln	Ile	Tyr	Arg	Val	Val
	465				470					475					480
Arg	Glu	Ala	Leu	Asp	Ala	Glu	Ser	Asp	Ser	Ser	Ser	Ser	Ser	Asp	Ser
				485				490						495	

Asp

<210> 11

<211> 546

<212> PRT

<213> Paramyxovirus Chris-like Virus

<400> 11

Met	Glu	Val	Thr	Ile	Leu	Thr	Ala	Tyr	Ile	Ala	Ala	Ser	Val	Phe	Thr
	1			5					10					15	
Cys	Cys	His	Ser	Gln	Leu	Ala	Leu	Ser	Glu	Leu	Thr	Lys	Ile	Gly	Ile
		20						25					30		
Ile	Pro	Gly	Arg	Ser	Tyr	Asp	Leu	Lys	Thr	Ser	Thr	Gln	Ala	Ser	Tyr
		35					40					45			
Gln	Tyr	Met	Val	Ile	Lys	Leu	Ile	Pro	Asn	Val	Asn	Gly	Leu	Asn	Asn
	50					55					60				
Cys	Thr	Asn	Ser	Thr	Val	Glu	Ser	Tyr	Lys	Lys	Met	Leu	Thr	Arg	Leu
	65				70				75						80
Leu	Asn	Pro	Ile	Asp	Val	Ala	Leu	Lys	Lys	Met	Lys	Asn	Ala	Val	Ser
				85				90						95	

Asp	Lys	Ala	Pro	Glu	Lys	Leu	Gly	Asn	Val	Glu	Phe	Trp	Gly	Ala	Val		
			100					105					110				
Ile	Gly	Gly	Val	Ala	Leu	Gly	Val	Ala	Thr	Ser	Ala	Gln	Ile	Thr	Ala		
		115					120					125					
Gly	Val	Ala	Leu	His	Asn	Ser	Ile	Gln	Asn	Ala	Asn	Ala	Ile	Leu	Thr		
		130				135					140						
Leu	Lys	Asp	Ser	Ile	Arg	Gln	Ser	Asn	Lys	Ala	Ile	Gln	Glu	Leu	Gln		
145				150						155					160		
Thr	Ala	Met	Ser	Thr	Thr	Val	Val	Val	Leu	Asn	Ala	Leu	Gln	Asp	Gln		
			165						170					175			
Ile	Asn	Asn	Gln	Leu	Ala	Pro	Ala	Ile	Asn	Ser	Leu	Gly	Cys	Gln	Val		
		180						185					190				
Val	Ala	Asn	Thr	Leu	Gly	Leu	Lys	Leu	Asn	Gln	Tyr	Phe	Ser	Glu	Ile		
		195					200				205						
Ser	Leu	Val	Phe	Gly	Pro	Asn	Leu	Arg	Asp	Pro	Thr	Ser	Glu	Thr	Leu		
		210				215					220						
Ser	Ile	Gln	Ala	Leu	Ser	Arg	Ala	Phe	Asn	Gly	Asp	Phe	Asp	Ser	Ile		
225					230					235					240		
Ala	Val	Leu	Asp	Leu	Asn	Met	Met	Thr	Val	Ile	Ser	Leu	Ile	Leu	Leu		
			245						250					255			
Glu	Ser	Asp	Ser	Ile	Arg	Gly	Arg	Ile	Ile	Asp	Val	Ser	Leu	Glu	Asp		
		260						265					270				
Tyr	Leu	Ile	Thr	Ile	Gln	Ile	Glu	Tyr	Pro	Ala	Leu	Leu	Thr	Ile	Lys		
		275					280						285				
Asp	Gly	Tyr	Tyr	Thr	Asp	Ile	Gln	Phe	Asn	Lys	Leu	Leu	Ile	Leu	Glu		
	290				295						300						
Glu	Leu	Ser	Gly	Tyr	Leu	Tyr	Phe	Leu	Ser	Ser	Cys	Trp	Leu	Glu	Gly		
305					310					315					320		
Leu	Thr	Tyr	Leu	Thr	Leu	Ile	Tyr	His	Asn	Val	Phe	Leu	Leu	Gln	Leu		
			325						330					335			
Leu	Leu	Tyr	Ala	Asn	Gln	Thr	Leu	Val	Pro	Leu	Leu	Val	Leu	Leu	Leu		
			340					345					350				
Gly	Leu	Val	Leu	Gln	Gly	Met	Leu	Thr	Ser	Cys	Ala	Arg	Thr	Arg	Val		
		355					360					365					
Val	Asn	Ala	His	Val	Pro	Arg	Phe	Ala	Leu	Ser	Gly	Gly	Val	Ile	Phe		
	370					375					380						
Ala	Asn	Cys	Ala	Pro	Val	Val	Cys	Lys	Cys	Gln	Asp	Pro	Leu	Tyr	Ser		
385				390						395					400		
Ile	Asn	Gln	Glu	Pro	Lys	Val	Thr	Asn	Val	Met	Val	Asp	Val	Asp	Ala		
			405						410					415			
Cys	Lys	Glu	Met	Tyr	Leu	Asp	Gly	Leu	Tyr	Ile	Thr	Leu	Gly	Lys	Ser		
		420					425						430				
Gln	Leu	Pro	Arg	Ala	Met	Tyr	Ala	Glu	Asp	Val	Ser	Leu	Gly	Gly	Pro		
		435					440						445				
Ile	Ser	Val	Asp	Leu	Ile	Asp	Leu	Gly	Asn	Glu	Ile	Asn	Ser	Ile	Asn		
	450					455					460						
Ser	Ala	Ile	Asn	Arg	Ser	Glu	Glu	His	Leu	Asp	His	Ala	Asn	Glu	Leu		
465				470						475					480		
Leu	Asp	Gln	Val	Asn	Pro	Lys	Ile	Val	Asn	Val	Lys	Thr	Phe	Gly	Val		
			485						490					495			
Met	Leu	Gly	Leu	Leu	Leu	Leu	Leu	Ile	Leu	Trp	Cys	Val	Val	Thr	Leu		
		500						505					510				
Val	Trp	Leu	Ile	Cys	Leu	Thr	Lys	Gln	Val	Ser	Arg	Val	Ser	Phe	Gly		
		515					520					525					
Gly	Ser	Met	Gly	Ser	Arg	Ala	Pro	Thr	Val	Asn	Ser	Leu	Ser	Gly	Phe		
	530					535					540						
Val	Gly																

545

<210> 12

<211> 292

<212> PRT

<213> Paramyxovirus Chris-like Virus

<400> 12

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Met Ser Asp Tyr Asn Pro Asp Val Leu Gln Gln Leu Val Lys Asp Gly
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Ile Lys Thr Ile Glu Leu Leu Gln Gln Ser Pro Glu Asp Phe Gln Lys
          20           25           30
Thr Tyr Gly Arg Ser Ala Ile Gln Glu Pro Ser Thr Arg Ala Arg Ile
          35           40           45
Gln Ser Trp Glu Ser Arg Asn Pro Asp His Asp Tyr Thr Gly Asn Lys
          50           55           60
Asn Gln Arg Ser Glu Gly Ala Lys Glu Arg Ala Asn Lys Ser Glu Ser
          65           70           75           80
Ala Gly Thr Ala Ser Ala Asp Gly Gly His Gly Asp Lys Pro Ser Asn
          85           90           95
Asn Gly Gly Asp Ser Gln Asn Glu Tyr Gln Gly Ser Asp Gln Gln Val
          100          105          110
Trp Asp Ala Ala Tyr Asn Asp Gly Asn Ser Gly Gly Ala Trp Gly Gly
          115          120          125
Pro Thr Gly Gly Leu Pro Thr Ala Gly Glu Arg Gly Tyr Pro Ile Thr
          130          135          140
Thr Gly Asn Gln Glu Phe Glu Gly Tyr His Pro Asp Gly Pro Val Asp
          145          150          155          160
Ala Arg Glu Tyr Asn Gln Ile Ser Ser Met Asp His Glu Met Ser Ala
          165          170          175
Ala Glu Thr Leu Gly Ser Ser Thr Gln Leu Thr Thr Met Arg Asn Ala
          180          185          190
Thr Thr Asp Asp Phe Ala Lys Ile Phe Glu Glu Gly Thr Pro Lys Val
          195          200          205
His Arg Arg Leu Arg Gly Ile Thr Ala Val Val Pro Ala Gln Lys Gln
          210          215          220
Pro Gly Ala Val Gly Gly Pro Val Lys Lys Gly His Arg Arg Glu Tyr
          225          230          235          240
Cys Ile Asp Thr Phe Gly Gly Arg Thr Ile Ile Arg Glu Trp Cys Asn
          245          250          255
Pro Gln Cys Ala Pro Leu Thr Val Thr Pro Thr Gln Lys Glu Cys Ser
          260          265          270
Cys Gly Glu Cys Pro Arg Gln Cys Ala Arg Cys Ile Asp Asp Arg Gly
          275          280          285
Tyr Trp Pro Lys
          290

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<210> 13

<211> 160

<212> PRT

<213> Paramyxovirus Chris-like Virus

<400> 13

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Met Ser Ser Ser Ser Leu Ser Arg Met Glu Ser Arg Leu Ser Ser Phe
 1           5           10           15
Tyr Ser Arg Val Arg Lys Thr Phe Arg Arg Arg Thr Ala Glu Val Pro
          20           25           30

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Ser	Arg	Ser	Arg	Arg	Gln	Glu	Pro	Glu	Ser	Lys	Val	Gly	Ser	Pro	Ala	
		35					40					45				
Ile	Pro	Ile	Met	Ile	Thr	Pro	Val	Ile	Lys	Ile	Arg	Glu	Ala	Arg	Glu	
	50					55					60					
Leu	Lys	Arg	Glu	Gln	Thr	Arg	Ala	Arg	Ala	Arg	Glu	Leu	Leu	Gln	Leu	
	65				70				75					80		
Met	Glu	Asp	Met	Glu	Ile	Asn	Pro	Gln	Ile	Thr	Gly	Val	Thr	Pro	Lys	
			85					90						95		
Thr	Ser	Thr	Lys	Gly	Gln	Ile	Asn	Arg	Tyr	Gly	Met	Leu	Arg	Ile	Met	
		100					105						110			
Met	Gly	Ile	Val	Ala	Glu	Leu	Gly	Glu	Val	Pro	Gln	Val	Asp	Phe	Pro	
	115						120					125				
Arg	Leu	Glu	Lys	Glu	Gly	Ile	Leu	Ser	Gln	Gln	Glu	Ile	Lys	Asn	Leu	
	130					135					140					
Arg	Asp	Thr	Ile	Pro	Thr	Val	Gln	Leu	Met	Leu	Glu	Ser	Ile	Ile	Arg	
	145				150					155					160	

<210> 14

<211> 313

<212> PRT

<213> Paramyxovirus Chris-like Virus

<400> 14

Met	Ser	Asp	Tyr	Asn	Pro	Asp	Val	Leu	Gln	Gln	Leu	Val	Lys	Asp	Gly	
1				5					10					15		
Ile	Lys	Thr	Ile	Glu	Leu	Leu	Gln	Gln	Ser	Pro	Glu	Asp	Phe	Gln	Lys	
		20					25						30			
Thr	Tyr	Gly	Arg	Ser	Ala	Ile	Gln	Glu	Pro	Ser	Thr	Arg	Ala	Arg	Ile	
	35					40					45					
Gln	Ser	Trp	Glu	Ser	Arg	Asn	Pro	Asp	His	Asp	Tyr	Thr	Gly	Asn	Lys	
	50				55					60						
Asn	Gln	Arg	Ser	Glu	Gly	Ala	Lys	Glu	Arg	Ala	Asn	Lys	Ser	Glu	Ser	
	65			70					75					80		
Ala	Gly	Thr	Ala	Ser	Ala	Asp	Gly	Gly	His	Gly	Asp	Lys	Pro	Ser	Asn	
			85					90					95			
Asn	Gly	Gly	Asp	Ser	Gln	Asn	Glu	Tyr	Gln	Gly	Ser	Asp	Gln	Gln	Val	
	100						105						110			
Trp	Asp	Ala	Ala	Tyr	Asn	Asp	Gly	Asn	Ser	Gly	Gly	Ala	Trp	Gly	Gly	
	115					120						125				
Pro	Thr	Gly	Gly	Leu	Pro	Thr	Ala	Gly	Glu	Arg	Gly	Tyr	Pro	Ile	Thr	
	130					135					140					
Thr	Gly	Asn	Gln	Glu	Phe	Glu	Gly	Tyr	His	Pro	Asp	Gly	Pro	Val	Asp	
	145			150					155					160		
Ala	Arg	Glu	Tyr	Asn	Gln	Ile	Ser	Ser	Met	Asp	His	Glu	Met	Ser	Ala	
			165					170						175		
Ala	Glu	Thr	Leu	Gly	Ser	Ser	Thr	Gln	Leu	Thr	Thr	Met	Arg	Asn	Ala	
		180						185					190			
Thr	Thr	Asp	Asp	Phe	Ala	Lys	Ile	Phe	Glu	Glu	Gly	Thr	Pro	Lys	Val	
	195					200						205				
His	Arg	Arg	Leu	Arg	Gly	Ile	Thr	Ala	Val	Val	Pro	Ala	Gln	Lys	Gln	
	210					215					220					
Pro	Gly	Ala	Val	Gly	Gly	Pro	Val	Lys	Lys	Gly	Ala	Pro	Thr	Gly	Val	
	225				230					235				240		
Leu	His	Arg	His	Phe	Trp	Gly	Thr	Tyr	His	Tyr	Pro	Gly	Val	Val	Gln	
			245					250					255			
Ser	Pro	Met	Cys	Thr	Pro	His	Cys	Tyr	Thr	Asn	Pro	Lys	Arg	Met	Leu	

			260					265					270						
Met	Arg	Arg	Met	Pro	Lys	Ala	Val	Cys	Lys	Met	Tyr	Arg	Arg	Pro	Gly				
		275					280					285							
Leu	Leu	Ala	Lys	Val	Thr	Arg	Leu	His	Thr	Leu	Ile	Arg	Arg	Leu	Lys				
	290					295					300								
Glu	Asn	Ser	Ile	Leu	Cys	Leu	Arg	Asn											
305					310														

<210> 15
 <211> 709
 <212> PRT
 <213> Paramyxovirus Nipah Virus
 <400> 15

Met	Asp	Lys	Leu	Glu	Leu	Val	Asn	Asp	Gly	Leu	Asn	Ile	Ile	Asp	Phe				
1				5					10					15					
Ile	Gln	Lys	Asn	Gln	Lys	Glu	Ile	Gln	Lys	Thr	Tyr	Gly	Arg	Ser	Ser				
		20						25					30						
Ile	Gln	Gln	Pro	Ser	Ile	Lys	Asp	Gln	Thr	Lys	Ala	Trp	Glu	Asp	Phe				
	35					40					45								
Leu	Gln	Cys	Thr	Ser	Gly	Glu	Ser	Glu	Gln	Val	Glu	Gly	Gly	Met	Ser				
	50					55					60								
Lys	Asp	Asp	Gly	Asp	Val	Glu	Arg	Arg	Asn	Leu	Glu	Asp	Leu	Ser	Ser				
65					70				75						80				
Thr	Ser	Pro	Thr	Asp	Gly	Thr	Ile	Gly	Lys	Arg	Val	Ser	Asn	Thr	Arg				
			85					90						95					
Asp	Trp	Ala	Glu	Gly	Ser	Asp	Asp	Ile	Gln	Leu	Asp	Pro	Val	Val	Thr				
	100							105					110						
Asp	Val	Val	Tyr	His	Asp	His	Gly	Gly	Glu	Cys	Thr	Gly	Tyr	Gly	Phe				
	115						120					125							
Thr	Ser	Ser	Pro	Glu	Arg	Gly	Trp	Ser	Asp	Tyr	Thr	Ser	Gly	Ala	Asn				
	130					135					140								
Asn	Gly	Asn	Val	Cys	Leu	Val	Ser	Asp	Ala	Lys	Met	Leu	Ser	Tyr	Ala				
145				150					155						160				
Pro	Glu	Ile	Ala	Val	Ser	Lys	Glu	Asp	Arg	Glu	Thr	Asp	Leu	Val	His				
			165					170						175					
Leu	Glu	Asn	Lys	Leu	Ser	Thr	Thr	Gly	Leu	Asn	Pro	Thr	Ala	Val	Pro				
	180							185					190						
Phe	Thr	Leu	Arg	Asn	Leu	Ser	Asp	Pro	Ala	Lys	Asp	Ser	Pro	Val	Ile				
	195						200					205							
Ala	Glu	His	Tyr	Tyr	Gly	Leu	Gly	Val	Lys	Glu	Gln	Asn	Val	Gly	Pro				
	210				215						220								
Gln	Thr	Ser	Arg	Asn	Val	Asn	Leu	Asp	Ser	Ile	Lys	Leu	Tyr	Thr	Ser				
225				230					235					240					
Asp	Asp	Glu	Glu	Ala	Asp	Gln	Leu	Glu	Phe	Glu	Asp	Glu	Phe	Ala	Gly				
		245						250					255						
Ser	Ser	Ser	Glu	Val	Ile	Val	Gly	Ile	Ser	Pro	Glu	Asp	Glu	Glu	Pro				
		260					265						270						
Ser	Ser	Val	Gly	Gly	Lys	Pro	Asn	Glu	Ser	Ile	Gly	Arg	Thr	Ile	Glu				
	275					280						285							
Gly	Gln	Ser	Ile	Arg	Asp	Asn	Leu	Gln	Ala	Lys	Asp	Asn	Lys	Ser	Thr				
	290				295						300								
Asp	Val	Pro	Gly	Ala	Gly	Pro	Lys	Asp	Ser	Ala	Val	Lys	Glu	Glu	Pro				
305				310					315					320					
Pro	Gln	Lys	Arg	Leu	Pro	Met	Leu	Ala	Glu	Glu	Phe	Glu	Cys	Ser	Gly				
		325					330						335						
Ser	Glu	Asp	Pro	Ile	Ile	Arg	Glu	Leu	Leu	Lys	Glu	Asn	Ser	Leu	Ile				

65					70					75					80
Thr	Arg	Leu	Asn	Gly	Ile	Leu	Thr	Pro	Ile	Lys	Gly	Ala	Leu	Glu	Ile
				85					90					95	
Tyr	Lys	Asn	Asn	Thr	His	Asp	Leu	Val	Gly	Asp	Val	Arg	Leu	Ala	Gly
			100				105						110		
Val	Ile	Met	Ala	Gly	Val	Ala	Ile	Gly	Ile	Ala	Thr	Ala	Ala	Gln	Ile
		115					120					125			
Thr	Ala	Gly	Val	Ala	Leu	Tyr	Glu	Ala	Met	Lys	Asn	Ala	Asp	Asn	Ile
	130					135					140				
Asn	Lys	Leu	Lys	Ser	Ser	Ile	Glu	Ser	Thr	Asn	Glu	Ala	Val	Val	Lys
145					150					155					160
Leu	Gln	Glu	Thr	Ala	Glu	Lys	Thr	Val	Tyr	Val	Leu	Thr	Ala	Leu	Gln
			165						170					175	
Asp	Tyr	Ile	Asn	Thr	Asn	Leu	Val	Pro	Thr	Ile	Asp	Lys	Ile	Ser	Cys
			180					185					190		
Lys	Gln	Thr	Glu	Leu	Ser	Leu	Asp	Leu	Ala	Leu	Ser	Lys	Tyr	Leu	Ser
		195					200					205			
Asp	Leu	Leu	Phe	Val	Phe	Gly	Pro	Asn	Leu	Gln	Asp	Pro	Val	Ser	Asn
	210					215					220				
Ser	Met	Thr	Ile	Gln	Ala	Ile	Ser	Gln	Ala	Phe	Gly	Gly	Asn	Tyr	Glu
225				230						235					240
Thr	Leu	Leu	Arg	Thr	Leu	Gly	Tyr	Ala	Thr	Glu	Asp	Phe	Asp	Asp	Leu
			245						250					255	
Leu	Glu	Ser	Asp	Ser	Ile	Thr	Gly	Gln	Ile	Ile	Tyr	Val	Asp	Leu	Ser
			260				265						270		
Ser	Tyr	Tyr	Ile	Ile	Val	Arg	Val	Tyr	Phe	Pro	Ile	Leu	Thr	Glu	Ile
	275						280					285			
Gln	Gln	Ala	Tyr	Ile	Gln	Glu	Leu	Leu	Pro	Val	Ser	Phe	Asn	Asn	Asp
	290				295						300				
Asn	Ser	Glu	Trp	Ile	Ser	Ile	Val	Pro	Asn	Phe	Ile	Leu	Val	Arg	Asn
305				310						315					320
Thr	Leu	Ile	Ser	Asn	Ile	Glu	Ile	Gly	Phe	Cys	Leu	Ile	Thr	Lys	Arg
			325					330						335	
Ser	Val	Ile	Cys	Asn	Gln	Asp	Tyr	Ala	Thr	Pro	Met	Thr	Asn	Asn	Met
			340					345					350		
Arg	Glu	Cys	Leu	Thr	Gly	Ser	Thr	Glu	Lys	Cys	Pro	Arg	Glu	Leu	Val
		355					360					365			
Val	Ser	Ser	His	Val	Pro	Arg	Phe	Ala	Leu	Ser	Asn	Gly	Val	Leu	Phe
	370					375					380				
Ala	Asn	Cys	Ile	Ser	Val	Thr	Cys	Gln	Cys	Gln	Thr	Thr	Gly	Arg	Ala
385				390					395						400
Ile	Ser	Gln	Ser	Gly	Glu	Gln	Thr	Leu	Leu	Met	Ile	Asp	Asn	Thr	Thr
			405					410						415	
Cys	Pro	Thr	Ala	Val	Leu	Gly	Asn	Val	Ile	Ile	Ser	Leu	Gly	Lys	Tyr
		420						425					430		
Leu	Gly	Ser	Val	Asn	Tyr	Asn	Ser	Glu	Gly	Ile	Ala	Ile	Gly	Pro	Pro
	435						440					445			
Val	Phe	Thr	Asp	Lys	Val	Asp	Ile	Ser	Ser	Gln	Ile	Ser	Ser	Met	Asn
	450					455					460				
Gln	Ser	Leu	Gln	Gln	Ser	Lys	Asp	Tyr	Ile	Lys	Glu	Ala	Gln	Arg	Leu
465				470					475						480
Leu	Asp	Thr	Val	Asn	Pro	Ser	Leu	Ile	Ser	Met	Leu	Ser	Met	Ile	Ile
			485					490						495	
Leu	Tyr	Val	Leu	Ser	Ile	Ala	Ser	Leu	Cys	Ile	Gly	Leu	Ile	Thr	Phe
		500					505					510			
Ile	Ser	Phe	Ile	Ile	Val	Glu	Lys	Lys	Arg	Asn	Thr	Tyr	Ser	Arg	Leu
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Glu Asp Arg Arg Val Arg Pro Thr Ser Ser Gly Asp Leu Tyr Tyr Ile
530 535 540
Gly Thr
545

<210> 18

<211> 64

<212> PRT

<213> Paramyxovirus Nipah Virus

<400> 18

Pro Gly Thr Pro Met Pro Lys Ser Arg Gly Ile Pro Ile Lys Lys Gly
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His Arg Arg Glu Ile Ser Ile Cys Trp Asp Gly Lys Arg Ala Trp Val
20 25 30
Glu Glu Trp Cys Asn Pro Ala Cys Ser Arg Ile Thr Pro Leu Pro Arg
35 40 45
Arg Gln Glu Cys Gln Cys Gly Glu Cys Pro Thr Glu Cys Phe His Cys
50 55 60